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ABSTRACT

The quality of mother-child linguistic interaction was studied in 40 6-year-old English children and their mothers. Both the middle and working classes were represented in the sample. Tasks were administered in which children were to ask questions of their mothers. Questions were analyzed in terms of open versus closed. The majority of the questions were open, simple rather than complex in construction. Generally, results did not support the hypothesis of social class differences in mother-child language interaction as predicted by Bernstein's theory. An extensive analysis of the tasks is presented. (SBT)

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THE QUESTION-ANSWER EXCHANGE BETWEEN MOTHERS AND YOUNG CHILDREN

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Introduction

What are the learning opportunities mothers make available to their children? Are variations in these relevant to differences in what children learn? Within the possible scope of these questions we have confined our attention to what mothers make verbally available to their five and six year old children about matters of fact in the natural world. Mothers can actively initiate interaction and teach their children and they can passively respond to their children's enquiries. We can examine variations in this instructional interaction of questions and answers in both quantitative and qualitative terms, and look for antecedents, correlates and consequences of this variability.

While it would have been possible to conduct longitudinal or cross-sectional research within any one or more of several theoretical frameworks, administrative constraints have required us to use cross-sectional techniques and prior satisfactions with the validity of Bernstein's analysis of social class and language use have encouraged us to stay with it (Bernstein, 1961; 1970).

Bernstein's original thesis about members of the lower working class being generally confined to the use of a 'public' language through which speech serves mainly to define role relationships, while members of the middle class additionally had access to a 'formal' language permitting the utilisation of wider ranges of linguistic units and structures deployed for many functions. Subsequent refinements and elaborations have allowed the generation of hypotheses about the differential organisation, values and behaviour of families conducive to socialisation into different codes of language use (Bernstein, 1970), while Robinson (1972) has preferred to re-assert the functional characteristics of Bernstein's 'restricted' and 'elaborated' codes, laying emphasis upon the neglect of the referential function in lower working class speech; the language system is not exploited to <u>represent</u> the processes and structure of the natural world. In the context of socialisation, lower working class parents use speech to define role appropriate behaviour and to control behaviour directly.

In the area of concern here, Hess and Shipman (1965) had Negro mothers of different social classes instruct their six year old children how to sort wooden blocks which differed in respect of two variables each with two values and how to manipulate a knob on an 'Etch-a-sketch'

machine to copy five different patterns. In teaching the sorting, MC* mothers were more likely than WC mothers to orient their children towards the task, attempt to motivate them, demand a higher proportion of verbal rather than non-verbal responses, reward rather than punish and render their meaning verbally explicit when requiring action from the child (they would avoid saying 'Move that thing there! In teaching their children to play their role in creating experimenter-defined patterns with the 'Etch-a-sketch- apparatus, they were more likely to receive a high rating for their teaching proficiency during the instructional session, and in the construction session they were more likely to show their children what was to be copied and give explicit directions to them. MC children were more successful than WC children at sorting blocks and explaining the basis of this, and they etched more sketches with fewer errors.

The results might be summarised by stating that MC mothers were more likely to treat the situations as instructional and to pursue more effective teaching strategies, with language being exploited as an efficient medium for representing the discriminations required. In fact language was also exploited to attract attention and fulfil other functions necessary for quick learning. Where then she is placed in an instructional role, the MC mother exploits language to this end more than her WC peer - and we can also assert that she is more effective because her child performs better at the tasks taught. It is as well to note that Hess and Shipman point out that it is not social class per se that is relevant, in that a multiple correlation between three teaching measures and performance on 'Etch-a-sketch' was .67, while such a correlation between social class, mother's IQ and children's IQ was only .47.

If we transfer our attention from mother as active teacher to mother as a passive receiver of her children's questions, we again find substantial social class differences. Robinson and Rackstraw (1967) found that in answer to hypothetical 'wh' questions of their children, MC mothers were more likely than LWC mothers to answer the questions, to answer with more information presented in a clearer pattern, to point out relationships to other events in terms of similar-

*MC is used to refer to middle class, WC to working class, LWC lower working class and UWC upper working class

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ities and differences (Robinson, 1972) and to prefer appeals to causes, consequences and analogies (strong modes) to appeals to regularity or assertion (weak modes) for 'why' questions. The relatively greater disposition of LWC mothers to use these latter appeals is consistent with the Bernstein thesis of a predominance of the controlling and role defining uses of laguage. Like Hess and Shipman's work, these studies were expanded to take into account the children's behaviour (Robinson and Rackstraw, 1972; Robinson, 1972) and the simplest summary allows one to say that the social class differences in the mothers' behaviour. A within-class analysis showed up predictable relationships but at least two were unexpected, viz. for MC mother-child pairs, high information provision by mothers was associated with a low information content in children's answers (overloading), for LWC pairs maternal use of 'strong' modes was associated with a higher use of 'weak' modes by the children.

These investigations begin to answer questions about mothers as active and passive teachers, but they do not tell us anything about the extent to which their children exploit them as passive teachers, i.e. how often their children approach them with what kinds of question.

A subsequent inquiry by Arnold and Robinson (1971) looked at children's questions and mothers' answers. A volunteer sample of diarists of their children's questions was recruited via a radio programme. The protocols of 50 mothers of six year olds were analysed. For once we eschewed analysis by social class - the scripts were almost solidly MC - while our device for measuring rates of questioning proved to be ineffectual. Since all mothers had recorded the same number of each 'wh' interrogative questions, we could not analyse data in terms of relationships between mother's behaviour and the proportion of 'how' questions, for example, What we were able to show was that mothers whose answers attempted to extend the child's knowledge and interest, encouraged independent thought, action or observation, demonstrated underlying principles or processes in operation and were explicitly related to the child's own previous experience had children who asked more complex questions which were more likely to be seeking advice

or instruction rather than expressing protest for example. We were encouraged by these results to believe that it was possible to relate answering tactics of mothers and questioning behaviour of children. While we might prefer to see the relationships as interactional rather than causal, there is no evidence either way.

Limitations of this investigation were several. While diaries are better than no data, they are susceptible to such distortions as mothers introduce by differential selection and accuracy of recording. Observation and its attendant hazards of observer effects may be preferred. Secondly, we had no control over contexts of questioning and no information about rates of questioning. Thirdly, the sample was sociologically homogeneous and could not be used to examine the usefulness of Bernstein's thesis.

We decided to try to overcome these by observing the interactions of mother/child pairs of different social class in controlled contexts in which we tried to put the responsibility for initiation of interaction on to the child. We did this by encouraging children to ask questions of the mother. The mothers were also encouraged to answer any questions and help their children in any way so as to maintain their interest. This meant that mothers were not simply passive respondents, but could take the initiative and stimulate questioning activities. We intended to perform a secondary analysis in which we could shift from a between-class to a within-class analysis, from a sociological to a social psychological level.

Our expectations about social class differences in mother' answers were the same as those derived from the application of Bernstein's theory to earlier studies (see Robinson and Rackstraw 1972, pp. 70-74 and p. 98).

For children's questions similar and additional considerations applied. In so far as our earlier expectations about social class differences in children's answers were supported by the data, we anticipated that the questions of LWC children would reflect their lesser knowledge about the world and the relatively lower skill at verbalising what they do know. Additionally, we assumed that the previous differential experience of answers to their questions and other inquiry

behaviours would be apparent. If one were to assume the partial relevance of reinforcement principles as determinants of question-asking, then the data of Hess and Shipman might lead us to expect a reduced rat of questioning in LWC. If, on the other hand, we prefer to rely upon ideas of an active organism adapting via processes of assimilation and accommodation (Piaget and Inhelder, 1969), or intrinsic motivation arising out of perceptual or conceptual conflict (Berlyne, 1960)- we might again expect that the prior history of unanswered questions or answers which failed to fill gaps in knowledge would eventually lead to an extinction of such strategies directed to conflict resolution or accommodation. If either or both stories are valid, we would expect more questions from MC than from LWC children.

With certain reservations in mind, we set out to select materials that would be suitable topics of interaction for six year old children and their mothers.

Method

Sample. 40 six year old children and their mothers were to be presented with a set of tasks requiring interaction between them. Twenty mother/child pairs were to be lower working class and twenty middle class, with a control for non-verbal intelligence test scores. We quickly ran into difficulties, since the school selected for its working class representation turned out to be almost solidly upper rather than lower working class in character. Relying on the head teacher's advice about her children, the experimenter visited mothers of six year olds to see whether they would participate in the investigation. Since the head teacher required that the children remain in the school during school-hours and was helpful to the extent of providing a satisfactory room, it was considered preferable to enjoy these standardised conditions than suffer the varied possible distractions of the children's homes out of school hours. Parents were regularly welcomed at the school and there was no suggestion that mothers were made nervous by being on a foreign soil. A sample of over twenty was built up by soliciting names from mothers who had already offered to cooperate and by further enquiries around the neighbourhood. No pressure was put upon mothers; three of those

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approached declined to take part.

After all mothers and children had been interviewed, the children involved were given individually administered Raven's Coloured Progressive Matrices to do. Two boys were away on three visits to the school and so were not tested, but were retained in the sample.

Armed with the Matrices scores, the experimenter asked the head teacher of a school in a solidly MC area for names of likely participants. A similar recruiting procedure was adopted; three MC mothers approached declined, two more had work commitments. When these children were tested on Ravens Matrices andtthe total sample examined, it was seen that we had failed to recruit WC girls whose scores were comparable to the other groups. This was particularly unfortunate; we had been aware of this hazard but were unable to do anything constructive within the confines of the populations of the two schools used; only the difference between LWC boys and girls was in fact significant ($p<.05$) (see Table 1).

Table 1. IQ, Age, Occupational Status and Size of Family of Sample Children

	IQ		Age	Status	Siblings	
Subjects	$\bar{X}$	σ	$\bar{X}$	$\bar{X}$, Hall/Jones	$\bar{X}$	N
WC Boys	107.5	9.2	6.3	5.1	3.1	10
WC Girls	95.2	14.5	6.6	5.3	3.5	10
MC Boys	104.7	12.5	5.9	2.1	2.1	10
MC Girls	101.9	12.0	6.2	2.7	2.6	10

The number of children in each family was also noted as providing some indication of the amount of maternal attention a child might normally expect to receive. The possible influence of family size on mother and child relationships can be illustrated by the comparison of two extreme examples. One MC mother and her only child chatted to eahh other a great deal throughout the interview referring to mutually understood events, while for a WC mother with six young children the experience of being on her own with her daughter (third in the family) appeared to be novel for both of them. They seemed to have difficulty in talking to each other as the mother was accustomed to addressing

several children at once and the girl was used to being one of a crowd.

The decision to accept that the UWC sample would be a less appropriate test of the hypotheses than the LWC was in part based upon the temporal constraints of completing the operation in a year.

Materials. Details of instructions are given in the selections specific to each task.

1. Toy Cash Registers: Decimalisation had been introduced just prior to the investigation which gave a special interest to the coins used in the machine. The machine itself was selected because it had a number of moving parts, knobs pressed were related to value tags that moved in response to them and learning about monetary transactions and cash registers was thought to be suitable activities for this age group.

2. Bingo Card and Family Allowance Book: A common complaint against work on social class differences is that experimenters and testers unconsciously or consciously stack the cards against the working class by using middle class topics - a far from unjustified objection alas! We therefore decided to include at least two items where the WC mothers would be as likely or more likely to be well-informed as MC mothers. These items were placed successively on the table and the child was invited to say what he knew about each and to ask any questions he had. Mothers were asked to answer questions and explain the use of each item. (The Family Allowance Book was not presented to only children.)

3. Pairs of Objects: Six pairs of objects were presented, a pair at a time, and the child was invited to comment and ask questions. Mothers were asked to answer questions and help in any way they liked. It was anticipated that one of the items of each pair would be familiar and one unfamiliar (see 2. above!). The underlying intention of including these items was to encourage statements of similarities and differences from mothers. Social class differences in categorisation behaviour have so far been only weakly established. Items were (i) banana and avocado pear, (ii) football rattle and African drum, (iii) Cheddar cheese and Emmental, (iv) Conker and cedar cone, (v) Tin of baked beans and tin of Chinese bean sprouts, (vi) Eggtimer (sand) and pinger (clockwork

cooking timer).

4. Questions: A set of ten questions were addressed to the child by the interviewer. If he could not answer, he was told to ask his mother. The answers to these questions were coded in terms of the original studies on answering to ensure comparability with previous samples.

5. Picture of Nursery Rhyme Land: This coloured picture depicting characters and events from nine nursery rhymes was displayed for both mother and child to see. The child was invited to comment and ask questions of his mother, who in turn was invited to respond.

It was emphasised that this was in no way a test situation. Interviewer intervention was kept to a minimum. All speech was recorded and subsequently transcribed.

Treatment of Results

With a very large number of possible comparisons, many to be made will not be subjected to statistical analysis. Initial gross comparisons of the total numbers of questions of various types asked by children of different social classes are followed by within task analyses linking mother child behaviour. A final section deals with analyses within social class.

Analysis of Questions over all Tasks

Results

Inspection of Table 1 shows apparent variation of IQ by social class In fact the variances are high and comparisons between groups give only the differences between the sexes in the working class significant ($U = 18$, $p < .05$).

The Children's Questions. A total of 726 questions was generated over the four questioning tasks of the procedure. There was no suggestion of MC children asking more questions (Table 2). In fact no differences were significant, but if they had been, WC boys were most likely to have been higher. With the distribution of questions by groups following the IQ distribution, it was necessary to check out this relationship. Overall, there was a significant association between

questions asked and IQ (rho = +.37, n = 38, p <.05), and while within category analysis gave no significant correlations, all were positive (Within class across sex, rho (MC) = +.44, n = 20, p >.05; rho (WC) = +.30, n = 18, p >.05; within sex across class, rho (boys = +.31, n = 18, p >05; rho (girls) = +.32, n = 20, p >.05).

Table 2. Numbers of Questions for each Task as a function of Social Class and Sex

Tasks	Working Class			Middle Class			Class Total
	Boys	Girls	Total	Boys	Girls	Total	
1. Cash Register	108	58	166	75	92	167	333
2a. Bingo Card	9	5	14	3	4	7	21
2b. Family Allowance	8	15	23	5	7	12	35
3. Pairs of Objects	81	42	123	59	82	141	264
4. Picture	24	12	36	15	22	37	73
TOTAL	230	132	362	157	207	364	726

It is noteworthy that the generally unquestioning WC girls produce the highest number of questions to the Family Allowance Book and that WC Children produce higher proportions than MC children for both this and the Bingo Card.

Types of Question. Analyses of the questions noted the initial word of each question, whether the question was open or closed, simple or complex, whether it was elicited by the task itself or by something a mother said and whether it was seeking information, advice or confirmation or denial.

1. First word of question. The most popular way of beginning a question was with 'what', which introduced nearly 43 per cent of the questions. The next highest proportion (12.5 per cent) began with inversions of the verb 'to be' (is/isn't, are/aren't) though this form was rarely used by WC girls who showed a marked preference for 'what' questions. 'How' questions exceeded 'why' questions which exceeded the combined totals of

'which', 'who' and 'what' questions. Table 3 shows the distribution of questions according to their first word, the number of children using this form of introduction, and the number of questions beginning with each word as a percentage of the total number of questions asked by each group.

Table 3 Initial Word of Questions

First word	Number of Children Asking	Number of Questions		Percentage of Each Groups Questions			
		Total Number	Percentage	Working Class Boys	Working Class Girls	Middle Class Boys	Middle Class Girls
What	35	309	42.6	39.6	62.8	31.2	42
Isn't, Aren't	23	91	12.5	19.6	2.3	8.9	14
How	18	41	5.6	5.6	5.3	7	4.8
Do, Did, Does, Don't	19	40	5.5	6	2.3	7	5.9
Where	18	32	4.4	3.9	3	4.4	5.9
Will, Shall	17	29	4	3.5	2.3	5.7	4.3
This, that, those	19	29	4	5.3	4.5	2.5	3.4
Can	13	19	2.6	2.6	1.5	3.2	2.9
How many, How much	8	14	1.9	.4	0	6.4	1.4
Why	7	13	1.8	.9	.8	3.8	1.9
You, We	12	12	1.7	2.2	2.3	.6	1.4
Has, Have	6	7	1	0	1.5	1.2	1.4
There	5	5	.7	.4	.8	1.2	.5
It's	4	5	.7	0	.8	1.2	1
Which	3	4	.6	0	.8	.6	1
And	4	4	.6	.4	.8	.2	0
Who	2	3	.4	0	1.5	.6	0
When	3	3	.4	.9	0	0	.5
If	3	3	.4	.4	0	.6	.5
Would	1	1	.1	0	0	.6	0
Others	29	62	8.5	8.3	6.7	12.1	7.24
Total number of Questions Asked		726		230	132	157	207

MC boys asked comparatively fewer questions than the MC girls or the WC boys, but they tended to introduce their questions in a greater variety of ways than the other three groups. Questions beginning with 'how' and 'why' and 'other words' comprised a higher proportion of their questions.

2. Open and Closed Questions. A closed question places constraints upon an answer demanding a 'yes' or 'no' reply, though an answer may be modified or augmented, e.g. Is this a pear? Closed questions often suggest hypotheses for which confirmation or denial is sought. Open questions, on the other hand, allow discretion in answering and are usually introduced by the interrogative marker words - who, where, when, what, which, why and how. Table 4 shows the number of open and closed questions each group asked during each task.

Table 4 Distributions of Open and Closed Questions by Social Class, Sex and Task

	Number of Questions Asked							
	Working Class				Middle Class			
	Boys		Girls		Boys		Girls	
Task	Open	Closed	Open	Closed	Open	Closed	Open	Closed
1. Cash Register	54	54	41	17	47	28	54	38
2a. Bingo Card	6	3	3	2	1	2	1	3
b. Family Allowance Book	5	3	12	3	2	3	3	4
3. Pairs of Objects	40	41	38	4	32	27	49	33
4. Picture	20	4	10	2	9	6	10	12
Total	125	105	104	28	91	66	117	90
Numbers as percentages	54	46	79	21	60	40	57	43

The majority of questions, 60 per cent, were open. The number of closed questions represented a similar proportion of each group's total questions except those asked by WC girls. If closed questions reflect the testing out of a child's idea or hypothesis, the WC girls appear to be the deviant group in this activity, particularly in relation to the third task when they were presented with pairs of objects. The WC girls

asked fewer questions altogether on this task and noticeably fewer reflected hypothesis scanning.

3. Simple and Complex Questions. Questions were defined as simple or complex according to their grammatical structure. Simple questions contained one main clause, while complex questions included subordinate or co-ordinate clauses. The vast majority of these children's questions were simple (93 per cent from the WC and 86.5 per cent from the MC), the MC children asking as many or more complex questions than the WC on every task.

Table 5 Distribution of Simple and Complex Questions by Social Class and Sex for each Task.

	Task	Working Class				Middle Class			
		Boys		Girls		Boys		Girls	
		Simple	Complex	Simple	Complex	Simple	Complex	Simple	Complex
1.	Cash Register	99	9	53	5	69	6	82	10
2a.	Bingo	8	1	5	0	2	1	4	0
b.	Family Allowance Book	8	0	14	1	4	1	5	2
3.	Pairs of Objects	77	4	39	3	47	12	72	10
4.	Picture	24	0	12	0	11	4	19	3
	Total	216	14	123	9	133	24	182	25
	Percentage within group	94	6	93	7	85	15	88	12

While the incidence of complex questions was low, the MC children contributed twice as many as the WC children to this total. Examination of the number of words in questions showed the MC boys ($\bar{X}$ = 4.5) asking slightly longer questions than the MC girls ($\bar{X}$ = 4.1), while the WC girls ($\bar{X}$ = 3.6) asked comparatively shorter questions.

4. Questions about tasks and about Mothers' remarks. An early attempt to disentangle some of the strands of the interaction situation distinguished questions elicited by the tasks themselves from questions arising directly from remarks made by the mother. Questions about the mothers' remarks included requests for elucidation or explanation of what had been said as well as indications that the child did not

understand what was said, e.g. 'What do you mean, right money?'. Requests for repetitition e.g. 'What?,'Pardon?' were omitted and not scored as questions at all.

Table 6. Questions about Tasks and about Mothers' Remarks

	Working Class				Middle Class			
	Boys		Girls		Boys		Girls	
	Task	Mother	Task	Mother	Task	Mother	Task	Mother
1. Cash Register	96	12	39	19	54	21	72	20
2a. Bingo	5	4	5	0	3	0	2	2
b. Family Allowance	6	2	9	6	4	1	6	1
3. Objects	68	13	39	3	51	8	78	4
4. Picture	22	2	9	3	8	7	19	3
Total	197	33	101	31	120	37	177	30
Percentage within group	86	14	76.5	23.5	76	24	85.5	14.5

A similar number of questions about the mothers' remarks were asked by each group, but as a percentage of the number of questions asked these represented a higher proportion from the WC girls and MC boys. Such differences may reflect a lower level of curiosity expressed about the tasks themselves as it may be that the mothers of these groups of children talked more and distracted their children's attention. Another explanation may be that some children are more inclined to question their mother's statements than others, but no conclusions as to the possible influence of class or sex in this matter could be reached with the evidence presented here.

5. Purpose of Questions. Each question was also categorised according to what a child was seeking in asking it. Information seeking questions were distinguished from questions seeking advice or assistance, and questions seeking confirmation or denial.

Table 7 Purpose of Questions by Social Class and Sex for each Task

		Working Class						Middle Class					
		Boys			Girls			Boys			Girls		
	Tasks	Inf.	Adv.	C/D*	Inf.	Adv.	C/D	Inf.	Adv.	C/D	Inf.	Adv.	C/D
1.	Cash Register	74	14	20	38	9	11	45	13	17	64	10	18
2a.	Bingo	7	1	1	4	0	1	2	0	1	1	2	1
b.	Family Allowance	7	0	1	12	0	3	4	0	1	6	0	1
3.	Objects	67	2	12	38	0	4	42	5	12	67	2	13
4.	Picture	21	0	3	11	0	4	10	0	4	10	0	12
	Total	127	17	37	103	9	20	104	18	35	148	14	45
	Percentage in group	73	8	19	78	7	15	66	12	22	71	7	22

*Inf. = Information seeking, Adv = Advice Seeking, C/D = Seeking confirmation or denial. C/D questions are included in therother two categories as appropriate.

Table 7 shows that the majority of questions from each group were seeking information. Many of the confirmation/denial questions were also seeking information, but in a different way, by suggesting hypotheses first and asking if these were correct, e.g. 'That's little Miss Muffett, isn't it?'. A slightly higher proportion of such questions come from the MC children compared with the WC children. As might have been expected, more questions seeking advice were asked during the cash register task where the child was much involved in an activity.

Discussion

The data on the rates of questioning are not compatible with the original hypothesis. The high variance of scores within the social class groupings imply that determinants of differential rates should be sought in individual differences rather than sociological categories. We have no ground for assuming that the failure to find a higher level of questioning in the middle class was an artefact of the experimental materials or situation. The diplomatist's retreat of having no comment to make is unfortunately our present refuge. A demand that the hypothesis of depressed questioning in lower working class be abandoned is premature in view of the

empirically supported theoretical backing that underlies it.

It is noteworthy that it is only the WC boys who are high; WC girls are low. If we look at other indices, WC girls are seen to ask fewer, shorter, structurally simple, open questions mainly of the 'What ..... ?' variety. This is one of the most primitive types developmentally.

Conversely, in spite of the low rate of questioning among MC boys, their questions are longer, structurally more complex, and wider in variety.

However, while these differences locate MC boys as linguistically most mature and point to a social class depression for WC girls, the evidence is as compatible with an hypothesis of retardation as with one of different orientation to questioning, especially with related IQ variance.

Analysis of Questions and Statements within Tasks

While the initial emphasis of the investigation was on the elicitation of questions, it was also concerned with other aspects of the verbal interaction generated by the tasks. The children's statements were anylysed, together with the responses and initiatives of their mothers and these will be examined for each of the different tasks. The complete coding frame for the analysis together with the mean scores on all variables can be seen in the appendix.

Task 1. Toy Cash Register. This toy proved to be a useful instrument in overcoming reluctance and encouraging mother and child pairs to participate in the investigation. It appealed to boys as well as girls and was familiar enough to both mothers and children not to arouse suspicions or anxieties. The machine had a variety of buttons to press, one of which released the till in which there was an assortment of real money, while a reel of paper emerging from behind a sliding door could be used for writing or drawing; a pencil was also provided.

Each child sat at the end of a low table with the mother and interviewer on either side opposite each other. The microphone was on the table with the tape recorder on a chair next to the interviewer. Each child was told:

'I've got a toy here that I want you to play with, and I want you to ask as many questions as you can about it. (Cash register was removed from box and placed on the table in front of the child.) I want you to play with it with your Mum/Mummy and ask her anything you like about it, or say anything you like about it. Play with it in any way you like.'

Each mother was asked:

'Can you play with him/her and answer any questions he/she asks? Play with him and help him in any way you like.'

The interviewer then moved to the side of the room, ostensibly busy with paper work, to give mother and child an opportunity to interact together.

While most of the mothers reacted enthusiastically, 'Oh, isn't that nice/lovely!', the reactions of the children varied. Most of the children were interested and started off eagerly and confidently, but some were reserved and reluctant to start playing. No system of scoring children's reactions was devised beforehand but individual differences were noted. Out of 40 children, the twelve who appeared noticeably shy or reluctant came from all four groups: three WC boys, three MC boys, four WC girls and two MC girls. However, with encouragement from mothers and the interviewer, all children did attempt to play with the toy in some way, some exploiting all aspects of it to the extent of involving their mothers in an organised game of shops, while others pressed buttons timidly and spoke little.

The Children's Questions and Statements. While differences emerged in the number of questions asked between the four groups, there were such wide variations between individuals within each group that some of these were significant.

Table 8. Number and Types of Question asked during Cash Register Task by Social Class and Sex (Mean Scores)

	Working Class		Middle Class	
	Boys	Girls	Boys	Girls
Number of Questions	10.8	5.8	7.5	9.2
Open	5.4	4.1	4.7	5.4
Closed	5.4	1.7	2.8	3.8

Table 8 (cont'd)

	Working Class		Middle Class	
	Boys	Girls	Boys	Girls
Number of Questions				
Simple	9.9	5.3	6.9	8.2
Complex	.9	.5	.6	1
About Task	9.6	3.9	5.4	7.2
About Mothers Speech	1.2	1.9	2.1	2
Number of words in Questions	45.8	21.7	33.9	38.5
Mean Length of Question	4.2	3.7	4.5	4.2

No clear and significant differences between class or sexes emerged, indeed it appeared that the WC boys produced a similar question asking pattern to the MC girls. The MC boys differed in asking comparatively fewer questions, but their questions tended to be longer, while the WC girls asked the fewest and the shortest questions. However, when the questions were considered in the context of speech in which they arose it was found that they represented a higher proportion of the speech of the WC children. The MC children made more statements about the task and chatted more with their mothers. These exchanges were reflected in 'sequences' of speech which were scored when an interchange of more than four utterances on the same theme occurred between mother and child (see Table 11).

Table 9. Questions as a Proportion of Children's Speech

Groups	Number of words in questions	Number of words in statements	Total number of words	Questions as a proportion of speech	
WC boys	458	899	1357	34%)	
				) 27.3%	
WC girls	217	858	1075	20%)	
MC boys	339	1857	2196	15%)	
				) 17.7%	
MC girls	385	1510	1895	20%)	
	±399	5124	6523		

Table 9 shows that the WC boys were most proficient in the production of questions, and that the WC children generally were less

inclined than the MC children to offer extra comments; questions made up a higher proportion of WC than MC speech (u = 98, p<.02). Some explanation of this difference may be found in the study of the mothers' behaviour but before this aspect of the interaction situation is examined a closer look at the children's statements will provide indications of the content of the 78.6 per cent of words uttered which were not used to ask questions.

Table 10. Characteristics of Children's Statements as a function of Social Class and Sex (Mean Scores).

Type of Statement	Working Class		Middle Class		Significance of differences between Classes
	Boys	Girls	Boys	Girls	
1. Specific to task	9.4	5.4	12.9	9.1	U = 132.5 p<.1
2. Relating to previous experience	.9	.7	.6	1.5	U = 222 N.S.
3. Making comparisons	.2	.4	.5	.6	
4. Listing numbers and coins	4	4.4	5.1	4.4	-
5. Answers to mothers concurrence	9.2	7.2	16.7	16.4	U = 75 p<.002
6. I don't know I don't remember	.2	.3	.9	2	U = 109.5 p<.02
7. Echoing Mothers words	1.8	.7	.5	.5	U = 161 N.S.
8. Tokens of Uncertainty	.1	0	.7	.4	X^2 = 10 p<.01
9. Number of words	89.9	85.8	185.7	151	U = 80 p<.02

It is interesting to see that statements specifically about the task came most often from the MC boys who had been comparatively low on question asking (Table 8), suggesting a preference to state what they knew or did not know (item 6) rather than ask questions. However, it was the MC girls who showed most inclination in their statements to relate to previous experience or point out similarities and differences. Answers to mothers and concurrence, i.e. agreeing with statements made by mothers, evoked the highest number of statements and a clear social class difference is suggested in the mothers' behaviour which elicited

such statements from their children. Indications of uncertainty, which made remarks more tentative, appeared more often in the speech of the MC groups, while the WC children more frequently echoed their mothers' words. It was difficult to define just what function the repetition of a person's words performed. Sometimes such instances appeared to emphasise agreement, clarify an utterance, or provide reassurance, but on other occasions it appeared to be a means of keeping a dialogue going, promoting a circularity of discussion or filling a gap in conversation.

Another aspect of the situation reflecting the relevance of the mothers' verbal behaviour was the greater incidence of statements declaring 'I don't know', 'I can't remember' from the MC children. These responses came in reply to questions from the mothers.

The Mothers' Answers, Statements, Questions. An interaction situation implies that activities stimulate and depend upon each other for their occurrence, and analysis requires the disentangling of the interweaving strands in the situation. The children's questions have been examined together with their statements, but the analysis of the mothers' verbal behaviour could not proceed on such clear-cut lines; altogether eighteen variables describing the mothers' activities were identified and these are defined in the coding frame in the appendix. The first fourteen variables were grouped to reflect five main activities which could be regarded in terms of initiatives and responses by the mothers, and whether anything is required of the child:

1) Provision of cognitive meaning (Initiative or Response)
2) Asking questions (direct and indirect)(Initiative) (Demands Verbal Response)
3) Provision of encouraging feedback (Response)
4) Corrective techniques (Initiative)(Demands Response)

Table 11 lists the components of each category together with the frequency of its occurrence within each group.

Table 11. Characteristics of Mothers' Initiatives and Responses in Relation to Social Class and Children's Sex.

Mothers' Initiatives and Responses	Working Class Boys	Working Class Girls	Middle Class Boys	Middle Class Girls	Significance of Difference between Classes
1. Provision of Cognitive meaning					
a) Informative answers or statements	6.9	4.5	9.9	8	U = 73.5 p <.002
b) Extending interest and knowledge	4.6	3.1	6.5	4.3	U = 138 p<.1
c) Relating to child's prior experience	1	1.4	1.9	1.8	U = 161 N.S.
d) Making comparisons	.6	0	1.3	1	U = 94 p<.02
2. Question Asking	13.7	10.7	22.1	19.4	U = 91 p<.02
a) Refractive reply	1.3	.9	.9	.6	
3. Provision of Encouraging Feedback					
a) Affirmative, corroborative	10.1	5.5	10.4	10	U = 135.5 p<.1
b) Encouragement, praise	.6	1	1.2	.1	
c) Hypothetical exampling, game	.6	.4	1.4	3	
4. Correctives					
a) Contradicting, pointing out error	1.8	2.4	1.9	3.9	U = 164 N.S.
b) Correction of error	2.1	2.2	1.8	1.9	
c) Clarifying child's remark	.9	.2	.3	.7	
5. Imperatives					
a) Positive Instructions	3.6	2.7	3.9	5.4	U = 170.5 N.S.
b) Negative Instructions	.2	.6	.4	.8	
6. Other Types of Utterances					
a) I don't know, I'm not sure	.4	.2	0	.1	
b) Other comments	3.6	4.7	3.9	5.1	
c) Mother echoes child's words	3.6	1.8	.8	1.6	U = 153.5 N.S.
d) Tokens of uncertainty	1.6	.8	2	1.8	U = 149.5 N.S.
7. Sequences					

1. Provision of Cognitive Meaning. Answers to questions or statements which offered children information were treated as providing cognitive meaning, and when mothers took matters further by providing additional information or trying to promote interest, this activity was considered to be extending a child's opportunities for cognition. The making of comparisons could also inject more cognitive meaning into a situation and the relating of a fact or idea to a child's previous experience could help to place it in perspective and link experiences together.

Table 11 shows the MC mothers injecting more cognitive meaning into their interaction with their children, providing more information, more often making comparisons and extending interest and knowledge. However, the mother of WC boys attempted to extend their children's interest and knowledge at least as often as the mothers of MC girls, but not so frequently as the mothers of MC boys.

2. Asking Questions. The mothers' question-asking was differentiated from positive instruction as it appeared to require a child to respond actively rather than passively. When a mother wanted her child to perform she would instruct, e.g. 'Press that red button' but if she preferred to motivate him to perform she would be more likely to ask a question, e.g. 'What's that red button for?'. Most of these items took the form of direct questions to the child which required a verbal answer or some kind of action. Indirect questions, however, were also designed to motivate the child to reply and so they were included, e.g. I wonder what else you would have in your shop', as were the offering of clues, e.g. 'Something you like to eat for tea'. Sometimes mothers had specific answers in mind, e.g. 'What is that called?', but other more general questions were intended to motivate children to perform physically or verbally, e.g. 'What else can you do with it?', 'Do you want to ask any questions?'.

Refractive replies by mothers were also included here. These occurred when mothers turned questions back on their children, e.g. 'What do you think?', or asserted that they knew an answer, e.g. 'You've seen one before'.

The extent to which mothers motivated depended in part on the responsiveness of their children to the task. If the children played with the toy enthusiastically, making statements and asking questions, there was less need for the mothers to motivate, but if a child was shy or reluctant the mother might keep on trying to stimulate interest and activity. Table 11 shows that the MC mothers ask significantly more questions than the WC mothers, with the mothers of the MC boys being highest. It may have been this stimulation that produced the high number of statements and answers to mothers from the MC boys which were noted in Table 10.

3. Provision of Encouraging Feedback. Mothers' answers were categorised as encouraging feedback when children's comments or actions received approval or corroboration. If a child's initiatives fail to evoke a response, or evoke a discouraging or even hostile response, it might not be surprising if his ability and inclination to take initiative decline.

In an interaction situation, it can be difficult to determine the starting point for the presence or absence of a specific activity where variables appear to be interdependent. Table 8 showed that the WC girls produced the fewest questions, and here in Table 11 the mothers of this group offered their children the least cognitive meaning, provided the fewest motivating initiatives and comparatively little encouraging feedback. The lack of encouraging feedback could have been a result of the comparatively fewer questions and statements produced by this group of girls, but might this have been because their mothers were less active in motivating? The circulator of the interaction situation creates a spiral of activity or inactivity which is cumulative. The MC mothers more often participated in a game with their children, suggesting examples of shop keeping activities, thus promoting more discussion with their children. This may have reflected a greater enthusiasm to play with their children or a greater confidence in themselves in the situation.

4. Correctives. No clear social class differences arose in the mothers' use of correctives. The apparent difference between the mothers of girls and of boys to contradict or point out errors

was in large measures due to the more frequent use of this tactic by two individual mothers, and the difference overall in the use of this technique between girls' mothers and boys' mothers was not significant (U = 187 N.S.).

5. Imperative Techniques. Contrary to expectation, imperative techniques were more often employed by MC mothers, though not significantly so. The apparently higher incidence of positive instructions to MC girls was again caused by one particular mother who both contradicted and instructed her child much more frequently than other mothers did.

6. Other Types of Statements. The incidence of mothers admitting ignorance was very low, but tokens of uncertainty, e.g. 'I think', 'perhaps', were more frequently used by MC mothers. It was noted in Table 10 that the MC children also used such expressions more frequently than WC children. These results may reflect the patterns of familial socialisation, as described by Bernstein, where MC children were often presented with a wider range of possibilities which are likely to induce a more tentative approach in making declarative statements.

The tendency of the WC children to 'echo' their mothers' words was minimised here with the MC mothers more often 'echoing' their children's words than did the MC mothers, though the difference between the two groups was not significant. 'Other comments' noted mostly comprised remarks to the interviewer which were not always relevant to the task. While such remarks were not directed towards the children, they were uttered within their hearing, and would be regarded as conveying messages to the children if they happened to be listening. Such situations must often happen in real life where children may derive information or impressions from adult conversations which they happen to hear.

7. Sequences. A sequence of speech was noted when a mother and child pair were engaged in a dialogue that extended beyond four utterances. The incidence of sequence reflected the occurrence of more sustained conversations between mother and child and suggested greater fluency of language and ease of communication. Table 11 shows that sequences of

interaction occurred significantly more frequently between mothers and children in the MC group than in the WC group, illustrating again Bernstein's thesis regarding the linguistic abilities of MC families.

Conclusions

The analysis of this task has shown clear social class differences in the verbal behaviour of the mothers. The MC mothers provided more cognitive meaning, asked more questions, and provided more encouraging feedback than the WC mothers. The MC children talked much more than the WC children, but did not produce more questions. The WC boys produced the most questions and the WC girls the fewest, while in the MC the girls asked more questions than the boys who seemed to prefer to make statements. The mothers of these boys asked most questions and also injected the most cognitive meaning into their remarks, but the comparatively low number of questions from the MC boys suggests that such maternal strategies may not be particularly conducive to question asking.

This suggestion raises an anomaly in the stimulation of children's curiosity. On the one hand provision of a great deal of information may offer plenty of ideas and scope for questioning, but on the other hand it may also reduce any areas of uncertainty which could have evoked questions. Perhaps too much provision of information and stimulation may deter question asking as much as too little.

Task 2 Bingo Card and Family Allowance Book. This task was designed to elicit descriptions from the mothers as well as questions from the children. The children were shown each item separately and invited to ask questions or say anything they wished, while the mothers were asked to answer questions and/or offer explanations. The two items were chosen because it was thought WC mothers would be likely to know about them and be able to explain them to their children. Problems of suitability however arose when the task was presented to the MC sample. It was suggested that a Bingo card was inappropriate to present to MC mothers on its own and as a compromise two other kinds of cards were introduced as well. Mothers and children were told that these different kinds of cards would be produced, one with numbers, one with letters and one with pictures. The children

were shown the cards separately and the procedure continued as for the WC interview, but all speech arising from the Lexicon and Happy Families cards was dropped from the analysis.

The Family Allowance Book was rightly regarded as something familiar to mothers who had more than one child (it was not presented to single child families), but the reactions of some MC mothers had not been anticipated. While most MC mothers were quite prepared to explain the use of the book to their children, a few considered it inappropriate to show such an item to a child and appeared to find the situation somewhat distasteful. Because of its higher incidence of one child families, the MC sample shrank more than the WC group on this task, (WC 19 children, MC 16.). The incidence of questions was low, probably because of the low collative properties of the stimulus materials. No significant differences were found between the two social classes in the number of questions asked or statements made by children, but the W boys were comparatively more talkative on this task than the MC boys.

Table 12. Characteristics of Chilren's Questions and Statements about the Bingo Card as a function of Social Class and Sex (Mean Scores)

Children's Questions and Statements	Working Class		Middle Class		Significance of difference
	Boys	Girls	Boys	Girls	
Number of Questions	.9	.5	.3	.4	
Offers own knowledge	1.8	1.8	.5	1.4	U = 143 NS
Making Comparisons	0	.1	0	.1	
I don't know, I can't remember	.4	.4	.6	.4	
Number of words in Statements	20.8	20.8	5.1	29	
N	10	9	7	9	

Table 13. Children's Questions and Statements about the Family Allowance Book as a function of Social Class and Sex (Mean Scores)

	Working Class		Middle Class	
	Boys	Girls	Boys	Girls
Number of Questions	.8	1.6	.7	.8
Offers own knowledge	1.8	1.1	1.1	1.7
Making Comparisons	0	.1	0	0
I don't know, I can't remember	.5	0	.3	1
Number of words in statements	19	8.1	11.4	12.4
N	10	9	7	9

It is interesting to note that it was the WC girls who asked the most questions in response to the Family Allowance Book. It may have been more familiar to them as they tended to come from larger families and its use may have been of greater significance at home, or their better performance in terms of question asking may have arisen from their mothers' behaviour in explaining the use of the book.

Mothers' answers initiatives and responses. Descriptions of the Bingo Card and the Family Allowance Book were broken down into six component parts and scores allocated to mothers according to the number of components mentioned. These are listed together with the mean scores in the appendix, but have been condensed to single scores in Table 14.

Table 14. Mothers' Verbal Behaviour in response to the Bingo Card as a function of Social Class and Sex of Children (Mean Scores)

	Working Class		Middle Class		Significance of difference between classes
	Boys	Girls	Boys	Girls	
1. Cognitive meaning					
a) Mothers' description	3.1	2	1.8	1	U = 160.5 N.S.
b) Informative statement	.5	.4	.3	.7	
c) Relating to previous experience	.1	.2	.4	1.1	
d) Making comparisons	0	.1	0	.2	
2. Asking Questions	.4	.5	.6	1.1	U = 168.5 N.S.
3. Affirmative corroborating	.1	.8	0	.6	
4. Corrective feedback					
a) Contradicting	0	.4	.1	.2	
b) Correction of error	0	.2	0	.2	
5. Other types of statement					
a) No knowledge of game	0	.2	.2	.1	
b) Other comments	.5	.9	.6	1.2	
c) Mother echoes child's words	.3	.3	0	.1	
d) Tokens of uncertainty	0	0	.1	.2	
6. Sequences	.1	0	.1	0	

How much description a mother offered about the game of Bingo was partly dependent upon what her child had already said about it. If the child gave an adequate description there was no call for the mother to reiterate this. However, Table 12 suggested that the WC children more often explained their own knowledge than the MC children, and the WC mothers tended to be more comprehensive in their descriptions of the game than the MC mothers. Nevertheless, no differences appeared between the classes in the incidence of sequence of speech which was very low on their task.

A similar pattern emerged in the mothers' descriptions of the Family Allowance Book when the difference between the two groups in explaining the use of the book was significant.

Table 15. Mothers' Verbal Behaviour in response to Family Allowance Book related to Social Class and Children's Sex (Mean Scores)

	Working Class		Middle Class		Significance of difference between classes
	Boys	Girls	Boys	Girls	
1. Cognitive Meaning					
a) Mothers' descriptions	3.6	3.5	1.8	2	U = 76 p ≤.02
b) Informative statements	0	.9	.3	.3	
c) Relating to previous experience	.4	.4	.7	.6	
d) Making comparisons	.4	.1	.1	.2	
2. Asking Questions	.7	.8	.9	2.3	U = 150 N.S.
3. Affirmative Corroborating	.5	.4	.6	1	
4. Corrective feedback					
a) Contrdicting	.2	.3	.6	.1	
b) Correction of error	.3	.1	.6	0	
5. Other types of statement					
a) Other comments	.1	1.1	1.3	1.1	
b) Mother echoes child's words	.3	0	0	.1	
c) Tokens of uncertainty	0	.1	.9	.7	
6. Sequences	0	.2	0	.1	
N =	10	9	7	9	

This was the only task on which the WC mothers offered explanations containing more cognitive meaning than the MC mothers. It appeared that the WC mothers felt more confident and competent in explaining these two items to their children. This result illustrates the important influence stimulus materials presented in an investigation can have on the results. It seems that for the WC mothers familiarity encouraged confidence in speech and explanation, while for the MC mothers novelty was a greater stimulus to explanation, perhaps because the MC have a greater range of strategies for tackling new situations. Tentative suggestions offer one way of approaching problems and it was noticed that MC mothers more often employed tokens of uncertainty, though the incidence of this was low. It can also be seen in Tables 14 and 15 that once again MC mothers tried to motivate

their children to reply to more often than WC mothers but the difference between the groups was not significant.

Task 3 Pairs of Objects

The Children's Questions. Each pair of objects was placed on the table and the child invited to ask questions or say anything about them. Mothers were asked to answer any questions and try to maintain their children's interest. Each child was told: 'Now I've got some objects here and I am going to show them to you two at a time. Some of them you may have seen before and some of them may be strange to you. I want you to ask any questions you can about them and say anything you like about them. Here are the first two, see if you can ask any questions about them.' It was thought that such stimuli would arouse interest and provide material for questions and statements about the properties and functions of the objects as well as opportunities for comparisons and classifications to be made. Many children appeared unsure of what to say about the avocado pear in the first pair of objects presented. In each class there were four children who needed no prompting, but for the rest one or more of the following three prompts was offered by the interviewer:

What does it look like?

Is it like the pears you have at home?

How is it different?

This intervention helped to get the task going and suggested ways in which unknown objects might be approached, and much less interviewer intervention was needed with the following pairs. If mothers could not provide the necessary information, e.g. 'No, I don't think I know what that it, to be honest', the interviewer provided explanations. Sometimes children asked questions directly to the interviewer which were answered by her, but whenever possible each child was encouraged to seek information from his mother and each mother was encouraged to help her child in any way she liked.

Table 16. Number of Questions Asked about each Pair of Objects as a function of Social Class and Sex.

	Working Class		Middle Class		Total
Object Pairs	Boys	Girls	Boys	Girls	
1. Banana & Avocado Pair	11	2	9	10	32
2. Football rattle & Drum	12	10	19	19	60
3. Cheddar & Emmental Cheese	7	2	6	5	20
4. Conker & Cedar Cone	10	9	9	8	36
5. Baked Beans & Bean Sprouts	8	5	8	10	31
6. Pinger & Egg Timer	33	14	8	30	85
Total	81	42	59	82	264

The last pair of objects presented, the clockwork timer and the hour-glass-styled egg timer elicited the most questions, (though comparatively few from the MC boys), while the next most popular pair of objects for questioning were the football rattle and the African drum. All the objects could be handled and explored, but these two pairs presented the most opportunities for manipulation. Examination of questions asked on all tasks (Table 2) showed that most questions were asked when children were actively doing something, e.g. playing with the cash register; and within this task it can be seen that the stimuli providing the most activity for the child also elicited the most questions. The pattern of question asking between the pairs of objects was similar, for the WC boys and MC girls, while the WC girls tended to ask fewest questions about each pair. For total questions, however, none of the differences between the groups were significant, (e.g. Total WC/ Total MC, U = 192, N.S.; WC boys/WC girls U = 32, N.S.; MC boys/MC girls, U = 46, N.S.).

Types of Questions. Analysis of the types of questions asked about the objects showed that the vast majority were simple (89%) and concerned with the task rather than arising from the mothers' speech (89.4%). More questions were open than closed, but it is interesting to note that the WC boys asked an almost equal number of open and closed questions on this task as they did on the cash register task. The MC children tended to ask more complex and slightly longer questions.

Table 17. Types of Questions Asked about Pairs of Objects as a function of Social Class and Sex (Mean Scores)

	Working Class		Middle Class	
	Boys	Girls	Boys	Girls
Open	4	3.8	3.2	4.9
Closed	4.1	.4	2.7	3.3
Simple	7.7	3.9	4.7	7.2
Complex	.4	.3	1.2	1
About task	6.8	3.9	5.1	7.8
About mothers' speech	1.3	.3	.8	.4
Number of words	31.7	14	25.9	33.8
Mean length of question	3.9	3.3	4.4	4.1

The Children's Statements. Once again the MC children talked more during the task and more often identified the objects correctly. However, there was little difference between the groups in the explanations of their own knowledge, but the MC group tended to talk more about the properties and use of the items and compare them with other things, while the WC group made more comparisons between the items. The MC children more often admitted ignorance or made other comments; many of these instances may have been caused by their mothers' activities in trying to motivate them. More tokens of uncertainty appeared in the speech of the MC children, while the WC children again showed a tendency to echo their mothers' words more often.

Table 18. Characteristics of Children's Statements in response to Pairs of Objects as a function of Social Class and Sex. (Mean Scores)

Children's Statements	Working Class		Middle Class		Significance of class differences
	Boys	Girls	Boys	Girls	
1. Correct labelling	5.6	5.8	7.2	7.1	U = 124 p<.05
2. Incorrect labelling	3	1.7	2.1	3.6	
3a) Comparison with other things	1.8	.2	1.6	2	U = 144.5 N.S.
b) Comparison between items	.3	.6	.1	0	
4. Comments about properties in use	6.1	5.7	6.5	8.1	U = 149 N.S.
5. Comments about own knowledge	3.1	3.1	3.0	3.3	
6. Subjective comments	1.2	.7	1.1	1.6	
7. I don't know, can't remember	1.9	1.6	4.8	5.6	U = 75 p<.002
8. Other comments	1.6	.9	4.1	4.8	U = 103 p<.02
Number of words	99.7	85.2	135.2	137.7	U = 131 p<.1
Child echoes mothers' words	1	1.2	.2	.5	U = 176.5 N.S.
Tokens of uncertainty	0	.2	.9	.5	X^2 = 5 p<.05

The Mothers' Initiatives and Responses

The mothers were generally interested in this task and occasional anxieties arising from ignorance about items presented were allayed by the interviewer providing information, but only when this was necessary. If the mothers activities in responding to, and stimulating their children are considered under the five main headings described earlier it is apparent that the MC mothers more often offered answers or statements incorporating cognitive meaning to their children and were much more inclined to ask questions to try to motivate them. Little difference emerged between the two social class groups in the provision of encouraging feedback or the use of correctives or imperatives.

It can be seen from Table 19 that the MC mothers provided more informative answers and statements, which included the correct labelling of items, and more often attempted to extend their child's interest and knowledge. The mothers of WC girls were noticeable for the comparatively fewer occasions on which they related something to a child's previous experience, but very little difference emerged between the groups in the making of comparisons or classifications. A clear difference did appear, however, between the classes in the questioning activities of mothers, as through direct questions, hints and suggestions the MC mothers more frequently encouraged their children to speak and respond. It was not, therefore, surprising if the MC children spoke more during the task, but it is also interesting to note that they more often responded with 'I don't know', 'I can't remember', suggesting perhaps that they did not always understand their mothers' intentions. Whether the MC mothers were expecting their children to know more than they did, or whether the children used this ploy as a way of deflecting their mothers persistent attempts to make them perform was difficult to judge, but on some occasions it did appear that the children did not understand what their mothers were 'getting at', and the mothers motivating initiatives seemed to confuse rather than clarify an issue, e.g.

Child: What's this?
Mother: Where have you seen those used
Child: I don't know, what on earth they are.
Mother: You've seen them used, haven't you?
Child: Nope.
Mother: You watch football on television, swinging round. You've seen those used, haven't you?
Child: What are they?
Mother: What do you think it is?

Child: Nothing

Mother: It's a rattle isn't it? You know, you've seen them on the television, they're swinging these things around haven't you really looked?

Child: No.

Table 19. Characteristics of Mothers' Initiatives and Responses in Relation to Social Class and Children's Sex (Mean Scores)

Mothers' Initiatives and Responses	Working Class		Middle Class		Significance of Difference between classes
	Boys	Girls	Boys	Girls	
1. Provision of cognitive meaning					
a) Informative answers and statements	5.4	3.7	5.9	7.6	U=129.5 p<.1
b) Extending child's interest	4.2	2.9	5	6	U=103 p<.02
c) Relating to previous experience	3	1.8	3.3	3.9	U=138.5 N.S.
d) i) Comparisons with other things	1.1	.8	1.5	1.2	U=159 N.S.
ii) Comparisons between itembs	.5	.4	.4	.1	
e) Classification	.3	.4	.3	.4	
2. Question Asking	7.9	5.1	13.4	13.8	U=65 p<.002
a) Refractive reply	1.4	.8	1.3	1.6	
3. Provision of encouraging feedback					
a) Affirmative corroborative	5.4	3.9	4.8	4	
b) Encouragement, Praise	0	0	.1	0	
c) Hypothetical exampling	.3	0	.4	.1	
4. Corrective techniques					
a) Contradicting, pointing out error	2.4	2.1	1.7	2.1	
b) Correction of error	1	.6	.3	1	
5. Imperative techniques					
a) Positive instructions	.9	.4	.6	.7	
b) Negative instructions	.1	0	.4	.2	
6. Other types of statements					
a) Inaccurate labelling	.1	.7	0	0	
b) I don't know, not sure	1.1	.4	1.1	.7	
c) Other comments	4.1	4.2	5.7	5.3	
d) Mother echoes child's words	2.6	1.4	1.1	1.2	U=147 N.S.
e) Tokens of uncertainty	1.5	.8	4.3	3.9	U=68 p<.002
7. Sequences	.4	.1	.9	1.5	U=99 p<.02

The little inaccurate labelling that occurred came from four WC mothers, and again it was the WC mothers who tended to echo their children's words more often. A significant class difference was found in the occurrence of expresssions of uncertainty by mothers which could be used to suggest ideas tentatively and open up areas of speculation when they could not offer definite knowledge. A higher incidence of sequences of dialogue again emerged between MC mother and child pairs reflecting a greater degreee of interaction in the MC compared with the WC mother and child pairs.

Conclusion. The results of this task resemble those on Task 1 where the MC mothers offered more cognitive meaning and also attempted to motivate their children more often. In terms of question asking it is difficult to disentangle the effectiveness of the mothers questioning activities as the number of questions asked by the children varied between the sexes within each class in opposite directions. A correlational analysis might provide more information about the relationships between mothers' strategies and their children's questions and statements.

Task 4. Questions to Children

The aim of this task was different; it was designed to obtain information about the child and his mother as answerers of questions. Each child was told by the interviewer,

> 'I've got a list of questions here that children of your age have asked their mothers. Their mothers told me about them and said some were rather difficult to answer. I'm going to ask you the questions and see if you know an answer, if you don't you can ask your Mum/Mummy/Mother.'

It was hopted that if a child could not answer he would refer the question to his mother who would answer him directly. This strategy was not successful however, as some children failed to respond at all and some mothers appeared to find difficulty in answering questions natuaally in the presence of an interviewer who presumably knew whet the right answer should be.

Each child was asked the following set of ten questions; if he or she did not reply, the probes in brackets were asked, though sometimes a response was still not forthcoming.

1) Why do people send rockets to the moon? (Do you know why people send rockets to the moon?)

2) What is electricity? (If I asked you 'What is electricity?' what would you say?)

3) Where is London? (Do you know where London is? Can you tell me?)

4) How is paper made? (Do you know how paper, like this, is made?)

5) Do you ever ask your Mum/Mother when will you be grown up? When do you think you will be grown up? (Do you know when you will be grown up?)

6) Where does the rain come from? (Do you know where the rain comes from?)

Supplementary. Do you know how it gets there?

7) What do you think is the biggest thing in the world? (Sometimes children ask 'what is the biggest thing in the world?' What would you say?)

8) Why do children go to school? (Do you know why children go to school?)

9) Why is it dark at night? (Have you ever wondered why it is dark at night? Do you know why it is dar at night?)

10) Sometimes people ask what would happen if something was different. What do you think would happen if there were no shops?

Supplementary. And then what would happen?

The supplementary questions to questions 6 and 10 were asked only when an appropriate answer was made to the substantive questions.

Children's Answers. The children's responses were scored according to whether they replied at all (reasons for lack of response seemed to include shyness, ignorance, lack of understanding or anxiety), the appropriateness of their answers and the number of fragmentary or associative responses offered. Fragmentary answers were disjointed comments which were relevant to the questions asked but not really appropriate answers, while associative comments arose from the subject matter of the question but were in no way answers to the questions, e.g. Q. 'Why do children go to school?' Child: 'By buses'. When this happened it appeared that children did not decode a question accurately, but instead responded to some isolated stimulus in the question rather than working out an appropriate answer, e.g. Q. 'Do you know how paper is made?' Child: 'Writing.

Table 20. Children's Responses to Questions (Mean Scores)

Children's Responses	Working Class Boys	Working Class Girls	Middle Class Boys	Middle Class Girls	Significance of difference between classes
Child offer answer	8.1	4.6	8.5	6.6	
I don't know	2.3	2.9	1.8	2.2	
No reply	.7	2.8	1.2	2.2	
Refers question to mother	.4	.5	.2	.3	
Children's Answers					
Appropriate	6.6	3.8	7.9	6.4	U = 122.5 p .05
Fragmentary or associative	3	1.6	.9	1.3	U = 125.5 p .05
Other comments	3.8	3.4	6.1	5.5	U = 139 N.S.

The table shows the MC children producing more appropriate answers, but this difference between the classes was due to the relatively good performance of the MC boys and the relatively poor performance of the WC girls, while the WC boys and MC girls offered a similar number of appropriate answers. The WC children more often offered fragmentary or associative answers while the MC children were more prone to add extra comments about the topics raised in questions. A child's concentration and ability to listen and understand questions can be expected to affect the sorts of answers he produces, but lack of understanding may be due to possible ambiguities in the presentation of questions as well as misconceptions in the recipients' processes of decoding. However, abilities in the understanding and use of language are likely to be highly relevant to the answering of questions.

Mothers' Responses and Initiatives. The mothers' role in this task was to respond to their children by helping them to answer the questions asked, but the extent to which they could do this depended on the children seeking their assistance. Once again the MC mothers provided more motivating initiatives encouraging their children to think out answers to the questions and offering clues to help them.

Table 21. Mothers' Responses and Initiatives on Questions Task (Mean Scores)

	Working Class		Middle Class		Significance of Difference
	Boys	Girls	Boys	Girls	
1. Cognitive Meaning					
a) Informative answers, statements	.6	1.6	.5	1.6	
b) Extending child's interest	.7	.8	.9	.7	
c) Relating to previous experience	.6	.7	1.1	1.2	
2. Question Asking	1.6	2	3.5	3.1	U = 123 p<.05
3. Corrective techniques					
a) Contradicting	.1	.3	.1	.2	
b) Correction of error	0	.3	.1	.2	

The results of this task must be treated with reservations as the conduct of the children varied considerably. After being given a variety of objects to investigate when they were expected to be active participants, the change of tactics to a more passive role of listening to the interviewer and responding was a difficult adjustment for some children. For the mothers too, the suggestion that this might be a test situation aoused suspicions as well as worries as to what the questions were going to be. Children were also sometimes distracted by other objects in the room when there was no item on the table on which to focus attention.

Task 5. The Picture

The picture measuring 46" by 22" depicted various nursery rhyme characters in a countryside setting. It was though that children would recognise some characters but not others, and that these might provide a stimulus for them to ask questions to fill gaps in their knowledge. The picture was held up for each mother and child to see as the interviewer said, 'I've got a picture here that I'm going to show you. I want you to ask any questions you can about it or say anything about it that you like. Is there anything you want to know?'

The mothers were encouraged to answer their children and respond to the situation in any way they wished. They often pointed to items in the picture asking the children what they were and suggesting clues to help children identify the different nursery rhymes. A similar number of

rhymes were recognised by each group of children, but comparatively few questions were asked. A tendency was noticed, particularly for some of the girls, to remark that they did not know specific items, thus identifying gaps in their knowledge, but they did not go on to ask a question to try to fill the gap.

Table 22. Number and Types of Questions asked by Children about the Picture. (Mean Score)

Type of Question	Working Class Boys (N=10)	Working Class Girls (N=8)	Middle Class Boys (N=10)	Middle Class Girls (N=10)	Significance of difference
Number of Questions	2.4	1.5	1.5	2.2	
a) About task	2.2	1.1	.8	1.9	
b) About mothers' speech	.2	.4	.7	.3	
2a)Open	2.0	1.3	.9	1.0	
b)Closed	.4	.3	.6	1.2	U = 141 N.S.
3a)Simple	2.4	1.5	1.1	1.9	
b)Complex	0	0	.4	.1	
Number of Words	8.5	5.1	5.9	7.5	
Mean length of question	3.5	3.4	3.9	3.4	

Two WC girls were not shown the picture as interviews had to be curtailed.

A higher proportion of the closed questions asked came from the MC group who also asked the very few complex questions there were. The comparatively few questions on this task may have been due to the mothers' assistance in pointing out particular items, e.g. Mother. 'You know that one don't you?'.

Child. 'No'

Mother. 'What animal is that?'

Child. 'A sheep'

Mother. 'What colour is it?'

Child. 'Oh, Baa Baa black sheep'.

When a mother was asking questions her child tended to respond rather than take the initiative in asking questions himself. The children seemed to prefer to make statements about the picture rather than ask questions, the MC children, in particular, labelled more specific details and generally talked more about the picture.

Table 23. Characteristics of Children's Statements about Picture (Mean Scores)

	Working Class		Middle Class		Significance of difference between classes
	Boys	Girls	Boys	Girls	
Specific labelling	6.9	7.1	9	9.1	U = 96 p .02
Number of rhymes recognised	5.4	4.8	5.2	4.7	
Other statements	4.5	1.4	5.6	3.3	U = 129 N.S.
I don't know	1.4	2	1.6	2.4	
Number of words	54.6	51.8	79.1	74.6	U = 112 p .05
Child echoes Mother	.6	.2	0	0	
Tokens of uncertainty	.1	0	.1	0	

Mothers Initiatives and Responses. There was little difference between the groups in response to this task (see Table 24)

Table 24. Characteristics of Mothers Initiatives and Responses (Mean Scores)

	Working Class		Middle Class		Significance of difference between classes
	Boys	Girls	Boys	Girls	
1. Provision of Cognitive Meaning					
a) Informative answers/statements	2.2	2.6	1.8	2.8	
b) Relating to previous experience	.2	.6	.5	.2	
c) Making comparisons	0	0	.3	.2	
2. Question Asking	5.6	3.8	7	7.4	U = 123.5 N.S.
3. Affirmative, corroborative	2.8	1.1	2.6	2.9	
4. Corrective techniques					
a) Contradicting	.5	.1	.4	.4	
b) Correction of error	.1	.3	.3	.2	
5. Other types of Statement					
a) I don't know	.7	.4	.2	.3	
b) Other comments	1.5	2.5	1.7	1.7	
c) Mother echoes child	1.1	.5	.1	.4	U = 174.5 N.S.
d) Tokens of uncertainty	0	0	.4	0	
6. Sequence	.7	1	.8	1.3	

The tendency of the MC mothers to ask more questions is similar to the pattern in previous tasks, although on this task the MC mothers were not distinguished by the provision of more cognitive meaning for their children. The mothers of WC girls offered as much cognitive meaning on this task as the mothers of MC girls, and a higher incidence of sequential conversations than the boys.

Summary and Immediate Conclusions

As with many open-ended analyses which look at semi-natural data, we find ourselves frustrated once our detective work proceeds to break summary scores by task with some simultaneous division of subjects into sub-groups. The number of observations on which average scores are calculated and the number of subjects for whom one has such wobbly indices become so small as to render estimates too unreliable for the sensible application of analytical statistics.

This shrinkage meant, for example, that when we came to examine the incidence of 'token of uncertainty' in the speech of mothers and children, the generally higher incidence of these features in MC speech did not always yield a significant difference; while differences for both mothers and children were significant, or nearly so, for the Cash Register and Pairs of Objects, they were not so on the Bingo, Family Allowance Book or Picture. Since there was much less speech in response to the latter three topics, we cannot say whether 'token of uncertainty' are a MC 'trait' or whether they are a function of situation as well. It would seem to be a better guess to view them as a 'trait', but there is more room for doubt than we would wish to have.

The two tasks where this factor is most irritating are the Bingo Card and the Family Allowance Book, for which a Social Class role reversal looks to be possible.

Such regrets set aside, the summary and initial evaluations are best broken into sections on (i) differences between tasks, (ii) children's questions, (iii) children's statements and (iv) the behaviour of mothers.

Differences between Tasks. The major difference for both mothers and children was between the Bingo Card and Family Allowance Book on the one hand and the Cash Register, Pairs of Objects, Question-Answer and Picture on the other. It is tempting to venture that social class differences in verbal behaviour are in part a function of task. WC and MC mothers behave in similar fashion - within the limits of their knowledge, all else being equal. Further, their children can be more knowledgeable than MC children - it just depends on the objects of knowledge. This issue is taken up more fully in the general discussion.

The tasks which evoked the greatest number of responses gave the clearest differences, which is consistent with the earlier comments about reduced reliability. The Nursery Rhyme Picture did not give differences on the cognitive meaning categories. Are MC mothers of six year olds abandoning the encouragement of a knowledge of fantasy and concentrating their efforts upon the harder data world of cash registers and other useful knowledge.

The Question/Answer activity failed to meet its intended objective of obtaining real child-directed answers to a controlled set of questions, but although there were no verbal objects of attention, the general stylistic categories gave class differences similar to those found on the other tasks.

Children's Questions. The analyses by task did not add anything of great import to the results obtained when questions across tasks were summed. Clearly there was variability in the question-evoking power not only of the separate tasks, but also within the tasks; for example, eggtimers and rattles evoked more questions than cheddar cheese and baked beans. However, we are not able to extract any meaningful differential power of stimuli that can be pinned down in terms of social class.

Children's Statements. With some inter-task variability, certain results are fairly stable. MC children differ from WC children in that they say more about the tasks, whether this be measured by counts of words or utterances. Both Pairs of Objects and Interviewer Questions found them producing more correct answers, while the Nursery Rhyme Picture gave more specific labelling and the Cash Register more answers to mothers and more task specific statements. Although the differences were not significant for any one task, they were generally higher on 'Other Comments'. But they were also more likely to confess ignorance and less likely to echo mothers' answers.

While these results give some support to the assertion of Labov (1970) that MC speakers are 'enmeshed in verbiage' (p. 164), this would be a misleading description to apply. The extra comments are related to the topic of interaction even if they are not direct and minimal answers to questions posed and within this higher productivity, the MC children are being more efficient at the tasks imposed. The echoic behaviour of the WC children (and their mothers) looks more like speaking for the sake of speaking; being short of anything new or

constructive to say, but suspecting it is one's turn to speak a minimal response is produced. The higher incidence of the 'I don't know' responses marks the fourth occurence of such a result (Rackstraw and Robinson, 1967; Robinson and Rackstraw, 1972, p. 133; Turner, 1972) and emphasises the need for an experimental investigation of the assertion that one distinction between MC and WC children is that MC children know that there are some things they know and other that they do not, whereas WC children are not really prepared to be sure about beliefs in the fact of the countersuggestion of an accepted authority.

With the Bingo Card and the Family Allowance book the story is not the same; in this case the social class profile tends to be reversed.

Mothers Verbal Behaviour. While many social class comparisons were not significant across all tasks, the pattern is consistent. For the Cash Register, Pairs of Objects, Question-Answer Exchange and Picture, the MC mothers are more likely to embark on sequences that hold the theme for four utterances or more; they are more likely to use tokens of uncertainty, but unlike their chidren, are somewhat less prone to admit ignorance. Like their children, WC mothers are more echoic, and less likely to indulge in other comments. Provision of encouraging feedback, the use of correction and imperative techniques do not discriminate with any conviction, but the bias is in favour of the middle class for them all. Question-asking is clearly a MC activity, and except for the Nursery Rhyme Picture, informative answers, extension of interest and knowledge, embedding in child's previous experience and making comparisons are more common to the MC mothers.

As with the children so with the mothers, the Bingo Card and Family Allowance Book gives a class reversal on information provided. The associations between the verbal behaviour of mothers and of their children are taken up in the next section.

Association between the Behaviour of Mothers and Children

While differences have been shown between classes in the verbal activities of both mothers and children in response to their tasks there were wide variations in performance between individuals within each class and sex group. A correlational analysis was instituted to explore the relationships between mother and child pairs firstly within each sex group within class, and secondly overall and within class, but ignoring sex differences. The analysis was confined to the two tasks most productive of speech, viz. the Cash Register and the Pairs of Objects, since these were also most productive of social class differences and probably provided the most reliable scores.

Correlations between Children's Questions and Statements and their Mothers' Verbal Behaviour

Questions. The number of questions asked by each child was correlated with five aspects of their mothers' verbal behaviour using Spearman's rank order correlations.

Table 25. Correlation of Children's Questions with Maternal Strategies

	Cash Register				Pairs of Objects			
Maternal Strategies	Working Class Boys	Working Class Girls	Middle Class Boys	Middle Class Girls	Working Class Boys	Working Class Girls	Middle Class Boys	Middle Class Girls
1. Provision of cognitive meaning	.52	.70*	.69*	.84**	.44	.13	.54	.34
2. Question asking	-.30	.39	-.33	.20	-.10	-.01	-.05	.25
3. Provision of encouraging feedback	.24	.47	.60	.74*	.58	.19	.39	.40
4. Correctives	.40	.32	.39	.41	.53	.60	.31	.33
5. Imperatives	.50	.61	-.28	.13	.27	.78**	-.15	.28
N	10	10	10	10	10	10	10	10

* means $p < .05$, ** mean $p < .01$

The provision of cognitive meaning by mothers, when they offered information, extended interest, made comparisons, or related to children's previous experience, showed positive correlations with the number of questions asked by the children which reached significance for three groups on the first task. Whether such explanations came in response to questions, or whether the provision of more information by some mothers elicited more questions from their children cannot be distinguished,

but it can be said that the number of questions asked by the children appeared to be related to the opportunities for learning provided by their mothers. While the initiative in asking questions lay with the children, the correlations show an association between the asking of questions and the provision of cognitive meaning by mothers.

In contrast, the motivating activities of the mothers appeared to be unsuccessful in eliciting questions, the positive correlations appearing between the girls and their mothers being too low for any enthusiastic conclusion to be drawn. The provision of encouraging feedback and correctives by the mothers, however, both showed positive correlations throughout, though only one attained significance. The use of imperatives appeared to have a closer association with the asking of questions in the WC groups than in the MC groups.

Task-related Statements. The number of task-related statements made by each child were correlated with the same five aspects of their mothers' verbal behaviour. The statements included from the Cash Register task were those specific to previous experience. For Pair of Objects, correct labelling by the children was included in the statements, together with comments about the properties or use of items, revelations of their own knowledge and experience of items, and comparisons between items or with other things.

Table 26. Correlations between Children's Statements and Maternal Strategies

	Cash Register				Pairs of Objects			
	Working Class		Middle Class		Working Class		Middle Class	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Maternal Strategies								
Provision of cognitive meaning	.67*	.44	.34	.36	.61	-.09	-.18	.79**
Motivating activities	.14	.30	-.53	-.30	.52	.07	-.16	.40
Provision of encouraging feedback	.67*	.17	.54	-.10	.40	.24	.02	.73*
Correctives	.34	.25	.44	-.43	.44	.32	.04	.59
Imperatives	.01	-.16	.09	-.38	.67*	.02	.12	.20
N	10	10	10	10	10	10	10	10

* means $p < .05$, ** means $p < .01$

No clear association emerged between children's statements and maternal strategies for all groups on both tasks. The provision of cognitive meaning produced the highest level of positive associations, though on Pairs of Objects the MC boys and WC girls deviated from the pattern. The provision of encouraging feedback also showed positive associations with children's statements apart from the MC girls in the Cash Register, but this position was changed on Pairs of Objects where there was a highly significant correlation. This difference between the correlations on the two tasks may partly be accounted for by the higher incidence of sequences of conversation noted between MC girls and their mothers on Pairs of Objects (Table 19). It is interesting to note that the MC girls were also the deviant group on the Cash Register in relation to correctives, where their statements showed the only negative association with this maternal strategy, but this result may have been due to the higher incidence of contradicting by MC mothers of girls on this task (Table 11).

The mothers' motivating activities and imperatives show negative or only low positive correlations with children's statements, though the WC boys are an exception to this pattern on the Pairs of Objects.

Questions and Statements. If the children did not have very much to say about the tasks, did they ask more questions? Or if they preferred to explain their own knowledge were they less inclined to ask questions? If the children had exhibited a preference for saying what they knew or for asking questions, an inverse correlation between the two might have been expected. This seems to have happened in one case only, the MC boys confronted with the pairs of objects. In contrast, the MC girls showed a high association between questions and statements on this task. The MC boys did not behave consistently between the tasks in regard to asking questions and making statements as there was a high correlation between these two activities for them on the Cash Register Task but not on the Pairs of Objects.

Table 27. Correlations between Children's Questions and Statements

	Working Class		Middle Class	
	Boys	Girls	Boys	Girls
Cash Register	.43	.32	.81**	.20
Pairs of Objects	.44	-.03	-.63*	.79**
N	10	10	10	10

* means $p < .05$ ** means $p < .01$

The correlation coefficients of the MC groups showed greater variance between tasks than those of the WC groups, the WC boys in particular showed the most consistency in the use of questions and statements on the two tasks.

Correlations of Summary Scores within and across Class for Combined Tasks. The correlations in Tables 25 and 26 indicate that the mothers' strategies of providing cognitive meaning, encouraging feedback and correctives, were all positively associated with the number of questions asked by the children, and showed predominantly positive associations with the children's statements. The mothers' question asking however, tended to show low or negative associations with both questions and statements from the children, while imperatives also had low or negative correlations with children's statements (with one exception) and with children's questions from the MC group.

It was decided to combine three maternal strategies together as respresenting conditions most likely to be conducive to the asking of questions or making of statements by children, viz. providing cognitive meaning, encouraging feedback and correctives. The mothers' scores on these combined strategies were then correlated with the children's questions and statements on a combination of both tasks.

Table 28. Correlations of Children's Questions and Statements with Combined Maternal Strategies, overall and within Class.

	Overall	Working Class	Middle Class
Children's Questions			
Mothers' combined strategies	.69**	.76**	.80**
Mothers' question asking	.15	.38	.19
Children's Statements			
Mothers' combined strategies	.67**	.66**	.54*
Mothers' question asking	.24	.33	- .21
Children's Questions			
Children's Statements	.44**	.28	.56**
Children's Complex Questions			
Mothers' combined strategies	.43**	.49*	.23
N	40	20	20

* means $p < .05$, ** means $p < .01$

Table 28 clearly shows associations between the mothers' combined strategies of providing cognitive meaning, encouraging feedback and correctives, and the number of questions and statements coming from their children. The results are significant both overall and within class. The association between these strategies and the children's complex questions is not so strong, but is significant in the WC group. Significant correlations also emerged between the children's question asking and statement making, particularly in the MC group. This result was unexpected in view of the results in Table 27, but it seems probable the wide variations between individual performances within each sex group on each task, evened out over the two tasks within the wider class group.

Motivating activities however, showed low, and in one instance negative, correlations with children's questions and statements suggesting that this strategy was not particularly successful is encouraging children to respond.

Comment. In an interaction situation it would be expected that each participant would affect the behaviour of the other and associations between variables would be demonstrable. This analysis suggests that certain maternal strategies were more closely associated with children's question asking than others. It also shows that explanations for differences in question asking may be found by examining the activities of mother and child pairs rather than comparing social class groups. As the number of questions asked over all the tasks was almost the same for each class (Table 2), but the proportions varied between the sexes within class, neither social class nor sex were effective predictors of performance on question asking.

The correlational analysis, however, suggests that the mothers' behaviour was a better predictor of children's questions and statements both within class and overall. Correlations do not, of course, identify causal links, and the interdependence of the behaviour of each mother and child pair make if difficult to pin down the cause and effect of any particular set of initiatives or responses, but the significant associations between maternal strategies and children's questions and statements suggest that a mother's behaviour had an important influence on her child's performance, irrespective of the social class group to which they belonged.

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